

Grain

April
1937



The Barefoot Boys' Brigade

Remember away back when we were kids how we would pop out of bed in the early morning full and bursting with eagerness to tackle a new day? How our eyes would shine and our throats give voice to a joyful shout as pantaloons jerked up over staunchly muscled legs and shirts flew over sun-tanned chests!

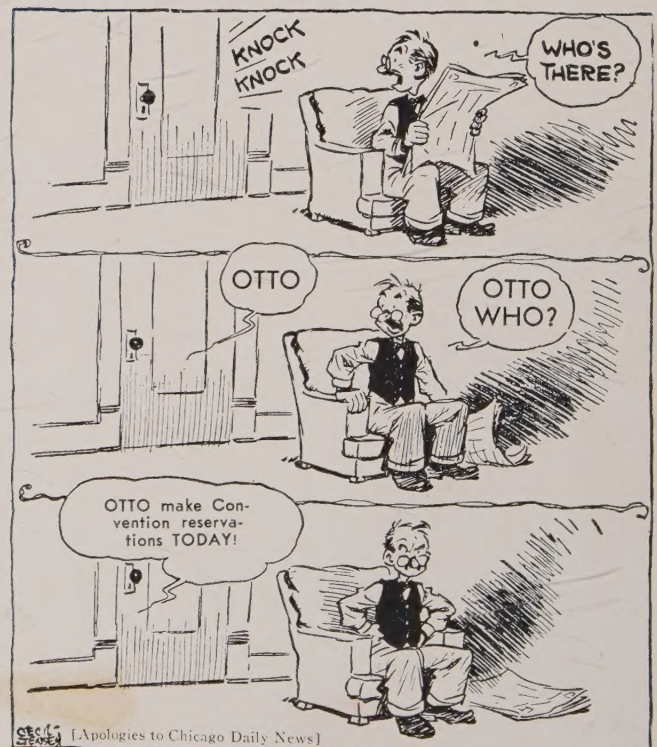
A new day — another world to conquer! We were invincible — we, the Brigade of Barefoot Boys sallying forth from our stronghold of Hope! "Bring on the World!" we cried triumphantly . . .

Rank upon rank of years have rolled up to face that brave Brigade who so gallantly trooped out "away back when" and the years have taken their toll. They took Tom and Bill. They took Olaf and Sven. They took Gus and Pete. But they DIDN'T take the glad fighting spirit — the unquenchable zeal of the Barefoot Boys Brigade.

1937 has dawned and a new day begins. The BRIGADE answers the stirring trumpet call and once again its numbers sally forth eager, clear eyed and confident.

"GRAIN" salutes in fervent admiration this hearty spirit and joins in the knowledge that 1937 will be amply taken care of by the veterans of the Barefoot Boys' Brigade.

EVERYBODY'S DOING IT!



Editorial

by DEAN M. CLARK

FAITH

Underneath the affairs of life and the actions of men courses a steady, enduring power that governs all things. That power is faith.

Everything that has been done since the birth of mankind has found its genesis, its being, and its end in the foundation of faith. Without faith in a greater destiny, primitive man would never have forsaken his family fire and joined with other two-legged creatures to conquer the prehistoric animal kingdom. Faith in their own culture led the more civilized nations to overcome savage nations and spread the light of superior intelligence. Philosophers, eager in their faith in a higher plane of living, sought and suffered that others might enjoy more noble thoughts. Artisans, statesmen, builders and soldiers, staunchly faithful to their creeds, through the ages have gloriously contributed their share to the scheme of life.

Except through faith, the mighty nations of North America would still be scattered tribes of aborigines. Columbus had faith in a vision and "sailed off the end of the world" to find and found a new one. The colonists who followed—from England and France and Germany—founded *their* faith upon the agricultural future of the new, fertile lands. Their plows bit deep from Florida to Hudson's Bay. Then, ever-widening vision opened new horizons and westward, ever westward, moved the pioneers to new lands. It was not gold; it was not sudden conquest; it was not hope of abrupt great wealth that urged these hardy souls onward. It was faith. Faith in the unbounded fertility of the fields. A faith that opened a new empire—an empire of grain.

Vast lands that knew but the trod of wild beast and wilder Indian soon grew to know only the peaceful measure of falling seed and harvested grain. From Indian teepees and buffalo wallows came towns and cities. From forest trails and canoe-routes came railways and huge grain boats. From strings of drying ears of corn in an Indian village came the mighty terminal elevators. And all . . . from *faith*.

The faith that built this continent into the greatest grain producing land the world has ever known still lives. It lives in the countless thousands of men heroically battling the odds of drouth and erosion and depression. And that faith is justified as the United States and Canada this happy spring look forward to the biggest crop in years.

The grain men have faith in the soil . . . and the world has faith in the grain men to keep them alive.

Faith? It's the "steady, enduring power that governs all things."

Grain

Published Monthly On The 10th

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HOW'S YOUR LEGS *Mr. Heintikson?*

by JOHN S. BUSH
Kingston (Ontario) Elevator Company

WHEN a belt elevator is worked beyond its intended capacity, injury will result to both belt and buckets. As is obvious from Figure One a bucket passing around the foot-pulley is subjected to severe stresses and the smaller the pulley the more the stress is intensified. Most of this stress is taken by the bolts, and since the connection is not rigid, the bucket moves in the direction of the arrow (Figure One) when it meets some resistance from the material, thus exerting a severe stress on the bolts until the bucket finds support against the belt at some point "A".

Slip

If the elevator is overloaded or forced to dig more than will suffice its bucket capacity, this stress is intensified. It will also cause excessive "slip" and "creep" at the head-pulley with a resultant excessive wear on the pulley side of the belt. "Slip" is always present to some degree although it is very slight in an elevator with a lagged pulley and sufficient tension.

Creep

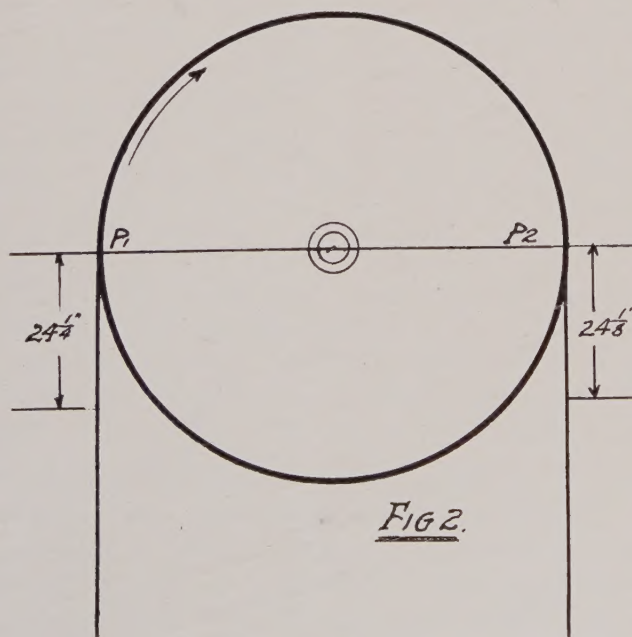
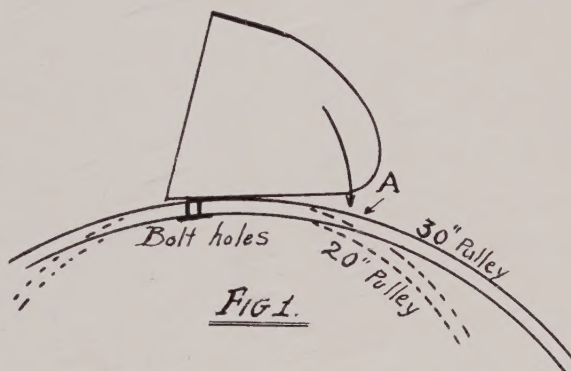
Belt "creep" is different. In (Figure Two) representing the head of an elevator, the up belt tension "P₁" will assume a certain

stretch, so that a section of belt normally two feet long will gradually elongate and reach a maximum extension just as it hits the head pulley. It will be apparent that this extension will be proportional to the load producing it within the elastic limit of the belt and if the belt is over stressed the extension will be increased.

Assuming this extension to be one-quarter inch for every two feet of belt, upon reaching the head-pulley the section will be stretched to twenty-four and one-quarter inches and upon passing over to tension "P₂" on the downside it will decrease its load and also its extension to twenty-four and one-eighth inches in length. In other words, in passing over the head-pulley every foot of belt shortens one-sixteenth inch and if the belt speed is 584 feet per minute (speed for six feet diameter pulley) the "creep" or relative movement between the belt and rim of the pulley will be thirty-five and one-half inches per minute or over two MILES PER WEEK of average service.

It is estimated that the combined "slip" and "creep" amounts to 0.5 per cent to 1.1 per cent of belt travel and by calculation

(Concluded on Page 9.)



Deciphering Diesels

by JAMES G. HAYHOE

Cargill, Incorporated, Minneapolis, Minnesota



JAMES HAYHOE

THE ever-increasing importance of the Diesel engine throughout the World perforce places it in the category of "items to study" on the wide-awake Superintendent's list. It has already entered the terminal elevator field in a few instances and the remarkable results achieved herald a new factor in power production. GRAIN herewith presents an illuminating account of the Diesel engine.

The so-called mystery of the Diesel engine is simple as A B C when you compare it with the old fashioned bicycle pump. In the process of pumping air into a tire by hand, the majority of us can recall how hot the barrel of the pump became; and we learned by experience that compression of air meant heat. The more compression, the more heat. When we pumped up an auto tire to 60 pounds pressure, the pump barrel became too hot to hold in the naked hand.

Now, increase the pressure to 450 pounds and the heat increases until it reaches 1000 to 1500 degrees (F.), which is extremely hot judged by any man's thermometer. Water boils at 212 degrees; your kitchen oven cooks delicious roasts at 375 degrees; tin melts at 449 deg., and lead turns to fluid at 622 degrees.

So, if you wonder about the Diesel engine and its ability to ignite oil without the use of spark plugs or magnetos, just remember the effect upon the tire pump — but magnified.

The piston compresses air only. A thousand degrees of heat is produced. Into this inferno, through minute holes, is injected oil that forms a spray so fine it is almost gaseous. When the hot, compressed air meets the gaseous oil, a rapid burning takes place — so rapid we call it an explosion — and the piston,

being the only movable object, gives way. A piston is a frugal fellow, inasmuch as he uses his energy 100%. When his head goes down, his feet turn the crankshaft upon which they stand. The crankshaft, in turn, passes on the movement into useful work. Repeat this process 250 to 1,200

times per minute; multiply one cylinder by as many as eight in an engine and you have a steady output of power as a result.

Noteworthy, too, is the total absence of poisonous carbon-monoxide exhaust fumes, proving complete combustion with no waste and multiplying the possibilities of installation.

So we dispel the mystery of the Diesel engine; but the mystery of its inventor, Dr. Rudolph Diesel, has never been unravelled and probably never will. Dr. Diesel, just before the World War, embarked on an English Channel ship to keep a rendezvous with the British Admiralty. The ship docked, on schedule, but a prolonged search of the boat failed to reveal Dr. Diesel; and to this day his disappearance is still shrouded in mystery.

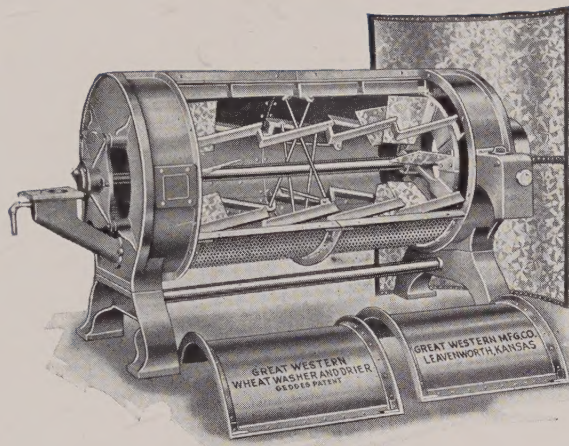
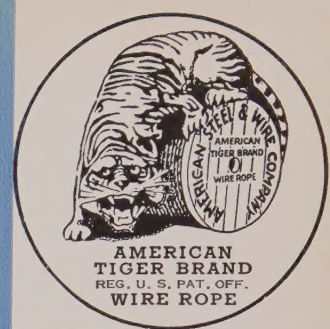
There is perhaps good reason for calling the present time the beginning of the Diesel Age. Economy is the modern watchword and, in comparison with other type engines, Diesel is synonymous with Economy. The steam engine converts only six per cent of the possible energy of fuel into actual energy. The gasoline engine betters this ratio more than three times, utilizing nineteen per cent of possible energy. Diesel starts where they leave off, for the oil engine rates thirty-three per cent and, with supercharging, which in layman's parlance means using pressure to crowd more air into the cylinder, increases that thirty-three per cent thermal efficiency to a still higher level.

It was perhaps the spectacular application of this

(Concluded on Page 12)

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Story by

H. J. KAYE

Elevator Superintendent

HIRAM WALKER & SONS,

Peoria, Illinois



The **OL' MASTER**



H. J. KAYE

ONE of the "old timers" at the nine million dollar Hiram Walker & Sons plant at Peoria is our thirty-five horse power Caterpillar Diesel tractor.

When construction first began on this gigantic property, our bulldozer-equipped tractor was used in leveling, completing grades (of earth, not of grain) and was the master of a hundred odd jobs. Upon completion

of the buildings, it was equipped with a special bulldozer, a bright brass bell, was dolled up with a coat of blue paint with red trim, and assigned to an

entirely new set of duties — the switching of grain, malt, feed, and coal cars around the plant.

Two years ago came the disastrous rack house fire. The "ol' master" was right on the job and saved several valuable carloads by pulling them out of danger of the roaring inferno.

This diesel has seen several thousand hours operation to date, and the fact that it burns low cost fuel oil and much less of it than a gasoline tractor, makes it an economical and dependable unit around any plant. The "ol' master" eats only about forty gallons of 6½¢ fuel oil per six day week of sixteen hours per day. The special 80¢ per gallon motor oil is changed only twice a month, and but five gallons being required for this routine chore.

It is the opinion of the writer that our Caterpillar is far more advantageous than a steam locomotive for switching cars because it can be started and stopped at will the same as one's automobile. In using a steam locomotive, on the other hand, the fire must be kept going all the time whether the engine is idle or not. The tractor can push or pull about six carloads of grain at a time on a level dry track.

In addition to always being available whenever needed, this practical unit never becomes pocketed, and its flexibility greatly enhances the in and out-bound movement of cars.

The lower scene reproduced shows in the background our grain unloading shed and tall brick elevator where corn, rye, and malt are sucked out of the cars by vacuum — and the "ol' master" shunting a string of grain cars. Above is the "hand-cuffed" grip used for pulling or otherwise directing the movements of the cars. Pabst (center) and Farmers National (right) elevators also salute the "old master."

I'll tell you more at the convention.



PAINTER, MIX UP SOME RED BEANS!

It is the shrinkage of raw oils in paint during weathering that causes the paint to peel and flake off. Recently, a South Bend manufacturing plant discovered a combination of soybean oil and tung oil which, mixed with paint, prevents this shrinkage. The discovery, which has altered all previous knowledge of how paint should be made, promises to make available a paint more durable than any now on the market.—*Science News Letter*.

HOW'S YOUR LEGS? —

(Continued From Page 15)

most of this is "creep" thus, in general elevator practice, a creep of one-half of one per cent is unavoidable.

It is very doubtful whether the co-efficient of belt friction or contact on the head pulley would increase proportionately with the load in a dusty elevator as the dust decreases this friction, as does also the centrifugal action of the pulley.

And since this "slip" and "creep" is objectionable and means a loss in elevator capacity and economy there is no remedy to eliminate it completely but it can be reduced to a minimum by consideration of the foregoing facts and can be summed up in so many words — GIVE YOUR ELEVATOR LEGS A CHANCE.

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The SHOVEL-BARROW combines shovel, scoop and wheelbarrow in one moderately priced unit. It renders obsolete the costly cumbersome "shovel and wheelbarrow" method of transporting grains and other loose materials.

Operation is practically effortless. Thrust the lip into the material — a slight pressure on the foot treadle and upper handle throws the load into the barrow. A second thrust fills the barrow. The load balances perfectly on the axle when being wheeled, eliminating exertion. Pressure on the foot lever lifts the body and discharges the load. The labor savings are obvious.

The SHOVEL-BARROW is steel built for heavy duty and long service. Capacity 4 cubic yards. Weight 94 pounds. Tires — steel, solid rubber or pneumatic, as specified.

There are plenty of places in the grain elevator where the SHOVEL-BARROW will save time, labor and money — including the basement, the work floor, the scale floor, the spout floor, the garner floor, for cleaning dust and spillage grains, and in the conveyor gallery.

Take the first step in reducing your handling costs by writing for complete data on the SHOVEL-BARROW.

SHOVEL-BARROW COMPANY
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Drawing by Rockwell Kent for (and courtesy of) the Commercial National Bank and Trust Company of New York. Engraving courtesy of Champion Paper & Fibre Company, Hamilton, Ohio

The Grit Harvest

IT'S AMAZING what a feller can do if he's got the necessary "git up" and grit about him. I was thinking about that t'other evening when I read a piece about a farmer named John Ridley. John was a wheat farmer down in South Australia some years back — 1843 to be exact — and from what I read, farming those days in Australia was like one sailor trying to navigate the *Queen Mary*. Help was scarcer than hen's teeth. When harvest time came, after a season of back-breaking toil, John Ridley was in a spot where he had the finest stand of his career — and no one to help him get it in. His predicament was the same as all the other farmers — but instead of weeping and

wailing and gnashing his teeth, John took another hitch in his belt and got busy.

He disappeared into the tool shed and the only time his family saw him for the next week was when they brought him his meals — and once when he had them unpack an old box of books and bring him a big history written by some oldtimer named Pliny.

Well, Saturday morning rolled around and Mrs. Ridley and the little Ridleys rushed to the door of their small cabin to see what the strange clattering noise was that broke the usual early morn peace. They stared in amazement, and the little 'uns hid behind Mother's skirt, as Daddy Ridley rode across the yard on the queerest looking contraption their eyes ever beheld. It resembled something out of a

nightmare; as if some mad demon had stirred up a few wagons, a windmill, a cutlery factory and threw them all together in the most fantastic manner possible. And to give the contraption a touch of complete unreality, the bewildered horses instead of *pulling* were hitched up behind *pushing*!

Daddy Ridley waved a triumphant arm and a huge smile lit up his haggard face.

"Mother!" he shouted, "*I've got it!* The crop will be under cover soon!" And he clattered off to the fields.

Well, John Ridley did get his crop under cover and, considering those days, he got it under cover amazingly fast. Word soon spread around regarding Ridley's new contraption that harvested and threshed a field quicker than a gang of men could do it, and the wheat growers from all the countryside gathered at the Ridley farm to view the miracle machine. Little did they reckon that from that awkward, piece-patch harvester would eventually come the mighty modern combines of today that sweep through millions of acres of bearded wheat with the ease and proficiency of a high-powered automobile gliding over concrete highways. But they did know that here was something that would lift the yoke of slow drudgery from harvest time and place the wheat farmer upon a vastly improved plane.

"John," said one old friend, "how in tarnation did you ever do it?"

John Ridley cleared his throat, while the encircling crowd drew nearer.

"Well, boys," he said, "it was really old Pliny who furnished the blue-prints."

"Pliny?" one grizzled veteran scratched his head. "Don't seem to recall a Pliny in these parts."

"Mother," called Ridley to his beaming wife, "fetch me that book."

Mrs. Ridley brought the book and placed it in her husband's hands. John very solemnly held it up and said, "Boys, meet Mr. Pliny!"

Those close enough could distinguish the faded letters on the cover, "Natural History, Book 18, Pliny." Even more solemnly, John Ridley opened the book to chapter 30 and spoke:

"Boys, when I found myself up against the problem of getting my crop in without help, I made up my mind to do something about it. I had a sort of hazy idea that wheat could be harvested mechanically and so I set to tinkering around, trying somehow to shape that idea into something practical. But no go. Then

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I suddenly remembered an old book my father had given me when I was a boy. I had a dim recollection of seeing something in there about mechanical harvesting of wheat.

"Mrs. Ridley dug it up for me out of a box and brought it out to the tool shed. I eagerly opened it and started reading. When I came to chapter 30 I realized why I had that hazy idea, for, boys, there was a description of the very machine I was trying to build, and I must have faintly remembered it from boyhood reading."

The group edged closer, drinking in every word.

"Pliny," went on John Ridley, "was a historian of olden times. He lived during the reign of the Caesars and in 37 A. D. he described a harvesting machine used by the Roman soldiers during their stay in Eng-

land. This machine, John said, laying a caressing hand on the harvester, is practically the same machine used 1800 years ago — and forgotten all these centuries."

Well, as I started out to say, it's amazing what a feller can do if he's got the necessary "git up" and grit about him. It was liberal doses of both these qualities in John Ridley that made modern wheat farming the gigantic industry it is today.

DECIPHERING DIESELS —

(Continued From Page 6)

power to railroad trains that made America Diesel-conscious. Here was news. A mile a minute from coast to coast. Great reduction in fuel costs. Lean years for the railroads might be turned into harvest years. New hopes arose. And, amidst a hullabaloo of high-powered publicity, Mr. and Mrs. America cheered the glittering, new streamlined Diesels.

With not so much banner waving, the Diesel engine began to infiltrate into the trucking business. Then steam shovels became Diesel shovels. But back of all these news-worthy applications there had long existed a Diesel industry that had quietly chased the "bugs" from early designs, spent millions for development and installed thousands of horse-power in engines for every type of power plant.

Whether applied to white-tie-and-tails yachts or dungaree work-boats. Diesel engines have brought new safety and economy on the water. Fishing boats out of Gloucester, San Pedro, Seattle and other ports have adopted them almost exclusively. Short- and long-run ferry boats find them ideal, for they start instantly and consume fuel only when operating; hence, no stand-by losses. Submarines are all equipped with Diesels and dredges are finding a new economy in them.

That is their record afloat. Ashore, the Diesel continues its forward march and its ever-widening application. Flour mills reduce their cost per barrel of flour, ice plants their cost per ton of ice. Private lighting and power plants in many factories become extremely profitable installations. Small and medium size cities install them in municipal power plants. Diesel switching engines will soon be as common as Diesel powered tugs. Terminal elevators are awakening to its use. Wherever power is used, there seems ample justification for investigating this newer, more efficient, more economical means of producing power.

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Mind Erosion

Soil erosion is a gripping topic of conversation whenever agricultural problems are mentioned. A feeling of foreboding arises as the loss of the rich topsoil is discussed. Lack of retained moisture is blamed and the vigorous summer winds of the Middle West blow away the powder-like dust that was once fertile soil.

But how about mind erosion? The ability of concentration is a definite and limited quality of the mind. It is the fertile topsoil and vulnerable to the ravages of modern elements. Telephones, electric lights, motor cars, and airplanes distract it. Newspapers, radios, schools, and moving pictures conventionalize it. The frantic stepped-up pace of twentieth century existence rasps it. Only the strong and wise can withstand the dust storms of daily excitement and of continual trivality.

Surely serious is the matter of mind erosion.



WHAT? WHEAT HIGHWAYS?

The thudding of tires on a brand-new and apparently smooth concrete highway has exasperated many motorists. The reason for this phenomenon is the bulging of the substance used to fill the joints between the big concrete blocks, recently the Parabond Corporation of America, in Cambridge, Massachusetts, disclosed its novel solution, now adopted by Connecticut, Rhode Island, and Massachusetts.

Parabond is a rubber lastex compound poured into the expansion joints, where it jells. To prevent bulging when the concrete expands, it is thickly interlarded with puffed wheat. The porous globules of puffed wheat constitute bubbles in the mixture, permitting the lastex to give without forming a ridge across the highway.—*Time*



CAN LOOK FOR A BUFFALO CHAPTER NOW

For some reason Buffalo has not been a very good field to interest the Superintendents. I am, however, in hopes that this situation may change and as soon as there is an opportunity for me to try and change this attitude, it will give me pleasure to do so.—Godfrey Morgan, Manager of Elevators, Spencer Kellogg & Sons, Buffalo, N. Y.

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THE Superintendents



CARL J. PAUKEN

SIXTEEN years in the grain business accounts for one half of Superintendent Carl J. Pauken's age. From office boy in 1920 for the firm of J. F. Zahm & Company, to Superintendent in 1932 of the Rice Grain Company's Toledo elevator, Carl has successfully leaped the hurdles in both the managing and operative ends of the business.

His story proves that intelligent endeavor still finds reward even in these days of attempted regimentation and the dole.

Promotions came regularly to the youthful office boy and he advanced steadily through the positions

(Continued Across Page)

THE name of William F. Schaediger has long been an important one in the Society of Grain Elevator Superintendents. Associated with the Society since its early days, Mr. Schaediger has established an enviable example of enthusiastic co-operation. It is in a large measure due to his efforts that the Society in the East functions so splendidly. Readers of GRAIN are familiar with his illuminating articles, and members attending the conventions recall his pertinent reports covering his multitudinous activities on behalf of the association.



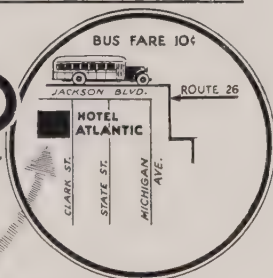
W. F. SCHAEDIGER

Bill started to work in Corn Products Refining Company's Edgewater Plant eighteen years ago as a millwright. From the start he was intensely interested in eliminating dust-explosion hazards. In working around the countless thousands of feet of conveyors and checking the manifold grain and grain products handling machines he evolved several theories regarding static electricity and grounding devices. These were put into practice with the result that since installation, the plant has not suffered a fire or an explosion from a static-electricity source.

In recognition of his work, he was made Fire Marshall in charge of Fire Protection and Safety. This position covered a multitude of activities among which were Elevator Conveyor inspection, Scale inspection, Safety inspection, Fire Drills, Sprinkler inspection and the conducting of all Safety activities. During this period he developed a comprehensive dust collecting system which removed the hazard of unconfined dust in the plant's two Elevators.

In 1924 the Corn Products Refining Company conducted a safety campaign throughout their plants under the safety supervision of William F. and Edgewater was the first to achieve a month period of no lost time accidents. At that time his plant was averaging 56 lost time accidents annually. In 1929 and 1930 the total was zero. 1936 witnessed another

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victorious year, his plant walking off with first honors in the Company's inter-plant contest.

Bill holds an Instructor's certificate in the American National Red Cross and has personally trained hundreds of employes in Red Cross First Aid. He is connected with the Bergen County Safety Council, the Industrial Council, and is Plant Secretary of the Executive and Foremen's Club. He is also an active member of the Metropolitan Chapter, American Society of Safety Engineers, New York City, et al, and so forth.

TOPS

The American wage scale is the highest in the world. A recent study taking the wage scale in Great Britain as 100 shows that wages in the United States equal 190; in Canada 155; in Germany 73; in Spain 40; in Italy 39.

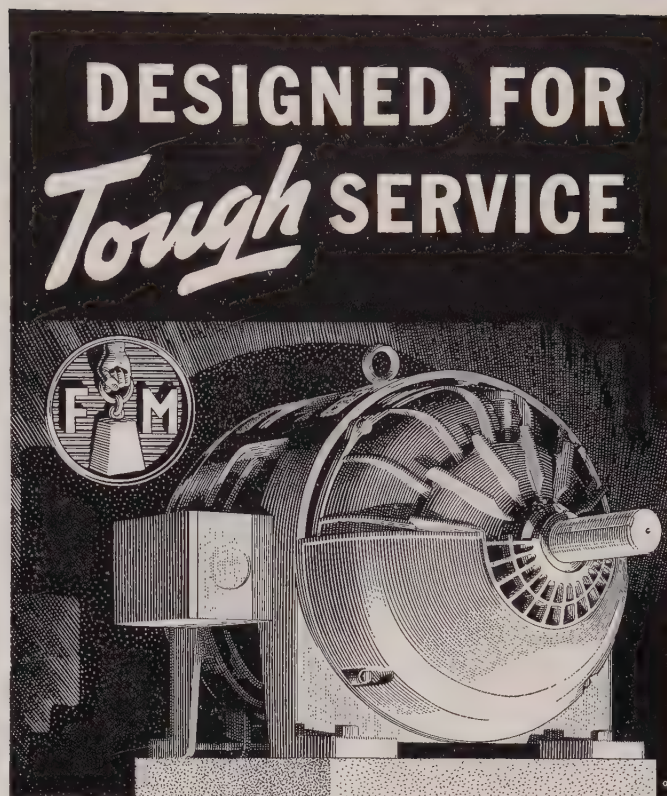
CARL J. PAUKEN —

(Continued)

of cash grain bookkeeper, margin and option clerk for Toledo and Chicago future tradings, and later became office manager. In 1926 the J. F. Zahm & Company affiliated with the Cloverleaf Elevator Company and for two years Carl served as Assistant Secretary. 1928 saw him taken in as Director and elected Secretary, fulfilling these positions until 1932 at which time J. F. Zahm & Company appointed an assignee.

Immediately after his duties with the old organization were culminated, Carl J. applied for the position of Elevator Superintendent with the Rice Grain Company. Mr. S. L. Rice, President of the firm, received the youthful applicant and listened intently to his qualifications and ideas. Carl J. stressed the factor of increased capacity with lower operative costs. He sold Mr. Rice the idea and plunged into the job with sleeves rolled up. After several month's careful survey of the plant, Superintendent Pauken instituted a series of changes which resulted in *doubling* the capacity with *less* operating cost. Today, after four successful years as Superintendent, Carl J. Pauken at the age of thirty-two has carved out a name for himself as one of the topnotch Superintendents of the country.

With a friendly grin he explains away his achievement by saying, "I am just a student in this great field of most interesting work. The friends and acquaintances I have made in the grain business have given me my chance by their assistance, friendliness and faith. It is a real pleasure to be one of them."



● Three motors out of four that we sell go into normal motor service — where a standard open-frame motor will not encounter difficult operating conditions. But that fourth motor — it may be needed where dust or corrosive fumes fill the air . . . or in a machine shop where powdered emery or metallic dust would cut motor life down to a matter of weeks or months.

Obviously, the simple enclosing of an open-type motor would be to invite trouble, so our engineers started from the base up to build an entirely new motor for tough services like these. Built-in fans on both ends of the motor shaft create their own ventilation system, eliminating "hot spots." The shaft runs on ball bearings that require lubrication no oftener than once a year. And, with all these advantages, the F-M fan-cooled motor is exactly the same in mounting size as regular open-frame motors.

If your service requires the extra protection that only a motor designed and built for tough service can offer, write for Bulletin G-36. Fairbanks, Morse & Co., 900 South Wabash Ave., Chicago, Illinois. 34 branches at your service throughout the United States.

6934-EA40.123



Here's the Dope

CONVENTION TO BE AN INSPIRATION

"The Society's eighth annual convention is going to be an inspiration to everyone fortunate enough to attend," suggests Frank L. Neilson, capable past President, "and I know a lot of good thoughts will result from the excellent tentative program so far prepared.

"Every grain firm's Superintendent is sure to return home well repaid for his time and expense—much to the benefit of his company."



CONVENTION COMMITTEES IN ACTION

"Reservations are streaming in," comes word from the Fort William-Port Arthur Chapter of the Society, "and our newly appointed committees are going full blast, meeting weekly or oftener to build the most attractive, interesting and helpful program and arrangements ever presented.

On the Reservations Committee serves W. D. McIntosh, Union Terminal Elevator and M. Montgomery, Fort William Elevator Company.

On the Reception and Entertainment Committee is H. Grant, Eastern Terminal Elevator; M. F. Beyer, Grand Trunk Pacific Elevator; J. A. Campbell, Canadian Consolidated Elevator; C. S. Maxwell, Manitoba Pool Elevators; F. J. McLean, Parrish & Heimbecker; A. J. J. Meyer, McCabe Brothers; and F. Sibbald, Grand Trunk Pacific Elevator.

Attendance and Publicity are in the able hands of P. C. Poulton, N. M. Paterson & Company; P. McCallum, Saskatchewan Pool Terminals, and J. H. Irwin, Eastern Terminal Elevator.

Handling the program is S. S. Orstad, Federal Grain and Northland Elevator companies, and R. Hetherington, General Manager, Canadian Government Elevators and A-L-L M-E-M-B-E-R-S E-V-E-R-Y-W-H-E-R-E!

Annual Associate Night details, a unique departure with this Society in which the few Associate members sponsor a dignified entertainment program, is

WE HAVE A LOCAL CHAPTER!

That's the cheering news that flashed into association headquarters last month from Percy Poulton, Superintendent of N. M. Paterson & Company's "big house" up in Fort William. "Resident Managers and Superintendents of this World's largest grain storage capital met, under the chairmanship of Mr. S. S. Orstad, Society Vice President and General Convention Chairman, and unanimously determined to make this approaching eighth annual convention the outstanding success in the association's annals.

President of this newest creation is M. Frank Beyer, Superintendent of the Grand Trunk Pacific Elevator,—a Director in the national association. First Vice President is P. McCallum, Superintendent of the Saskatchewan Pool Terminals (Second Vice President is the energetic "ball of fire"—Percy C. Poulton.) John A. Campbell, Superintendent of the Canadian Consolidated Grain Company's Elevator, is Secretary.

"Can the Chicago and Minneapolis Chapters boast of 100% membership as we can," they ask?

"And are we going at this Convention in a two-fisted way?!"

in charge of A. Woodside of Woodside Brothers, Robert E. Thornes of North Shore Supply Company, and J. R. Gibson of Halley-Carey-Swart, Ltd.

Transportation, and that's going to be a big problem under the elaborate plans they have for the several hundred expected, is being worked out by P. C. Poulton, N. M. Paterson & Company; C. W. Swingler, Saskatchewan Pool Terminals; K. Campbell, Bawlf Terminal Elevator; F. W. Pyett and F. Chenier, Saskatchewan Pool Terminals; J. Belanger, Manitoba Pool Terminals; M. McKay, United Grain Growers' Terminals; A. Bruce, Canadian Consolidated; F. McCallum, James Stewart & Company; E. H. Glover, Northwestern Elevator; E. A. Sellers, Northland Elevator, and J. H. Irwin, Western Elevator.

"Nothing will be too good!"

THEY'RE EXPECTING YOU!

"We are looking forward with a great deal of interest to the approaching annual Society Convention which is to be held in our City this coming June," comes word from Mr. E. B. Sutherland, Secretary-Treasurer of N. M. Paterson & Company, Limited, Fort William. "We hope that this affair will be very successful and that we will have the opportunity of meeting the various Elevator Superintendents from a GREAT number of American cities."



LIKE THAT BOAT I BUILT

Of course you've heard of that man that built the boat in his attic, but here's a better one, writes Harry Prue, Federal Grain Supervisor at Toledo, Ohio:

George R. Forrester, head of the George R. Forrester Grain Company of Toledo popular grain man in this section of the country, spent considerable time and money during the past few weeks constructing a cement lawn roller in his basement. Completed it weighs about four hundred pounds. But here's the pay-off, and perhaps some of your many readers can suggest how he can solve his problem,—it's too large to go through his basement door.

Please have this discussed at the Society's convention.



A SERIOUS MISTAKE

A rather serious mistake was made in the printing of the "Spiral Shelf" formulae on Page twenty of the March Number in that it should read:

$$y \cos \theta \text{ plus (not times) } \frac{v^2}{gr}$$

Also, and I presume the printers do not have plus marks, (Oh yes we do, the Printer) the second formulae for the limiting angle should read:

$$\sin \theta = y (\cos \theta \text{ PLUS } \frac{v^2}{gr})$$

"GRAIN" is getting more interesting every month. Keep up the good work.—John S. Bush, Kingston, Ont.

NO STONE UNTURNED

"No stone will be left unturned to insure 100% success of our large undertaking in putting on the best convention the Elevator Superintendents' Society has ever held," comes word from the convention city.

"Work has already reached the point where some of the best known grain heads and specialists in various lines have already been invited and their acceptances assured.

"The nearly 100,000,000 bus. storage capacity in these two adjoining centers are about evenly divided, and an extensive inspection tour will include many of the unusual and outstanding features embodied in them. These elevators have a world-wide reputation for their advancement, economy and efficiency.

★

SAYS PROGRAMS INSTRUCTIVE

Godfrey Morgan, Manager of the Spencer Kellogg & Sons Elevators, with headquarters at Buffalo, states "The papers and talks given at the last meeting of the Elevator Superintendents' Association were most interesting and instructive, and I hope you will be able to secure equally good papers and talks for this year."

Mr. Morgan is a Director of the Society and a staunch booster.

★

NO PRYING

Officers of several of the well known grain companies familiar with all the activities of the Society of Grain Elevator Superintendents suggest that any owner or operator who is skeptical about having his practices pried into write the Secretary for letters of assurance to the contrary from them. One of them remarks that "if the other owners and operators could appreciate how much advantage accrues to them through having their Superintendents attend the Society's meetings then every plant on the continent would hold membership!"

★

USE YOUR MEMBERSHIP

"The Society is an active member of the National Safety Council," points out National President Henry S. Cox of Star Grain Company's (General Mills) Chicago Rialto Elevator, "and it's up to each of us to ASK for any literature or other assistance that we want from this source. . . . Many of our boys are using this to great advantage."

MINNEAPOLIS INVITES VISIT ENROUTE TO CONVENTION

"The Minneapolis Chapter of the Elevator Superintendents' Association invites all those attending the Fort William-Port Arthur convention in June to stop off and go up with our group," states an announcement from Jack Coughlin Brooks Elevator Company, Vice President of the Chapter there.

"Many of the Superintendents are going to drive from Minneapolis and a few Saturday afternoon golf games are already reported to be in the making.

"Those from Duluth have issued an open challenge for every description of contest for Sunday morning."

Early arrangements are suggested by Mr. Coughlin and Past President Oscar W. Olsen, Globe Elevator Company, Duluth, who invite immediate correspondence TODAY!



"Come, come, boys! Don't you know any profanity?"

★

HE CLIMBS HIGHEST

"He climbs highest who helps another," states a proven axiom that has weathered the centuries," writes M. Frank Beyer, general superintendent of the Grand Trunk Elevator at Fort William.

Let us think . . . One of the nine District Chapters of Association of Operative Millers is sponsoring a very successful night school course in "Flour Milling Problems," and Northwestern Miller is training young millers with a correspondence course through Dunwoody Institute.

The first step towards any successful goal of mutual assistance will necessarily have to be the formation of further active superintendents' Chapters similar to those of the AOM — acknowledged boon to flour mill owners.

"He climbs highest . . ."

INSISTS ARROWHEAD IS GOD'S COUNTRY

Nowhere in North America will grain men find scenery so truly natural and undisturbed as they will enroute from Duluth to Fort William-Port Arthur. Nature was particularly generous to this part of the world, and it is hoped that many of those attending the Superintendents' Convention in June will be able to spend a few days in this restful atmosphere, comes word from the Convention Committee. The famous Isle of Royal and many other beauty spots await a coveted visit, with all varieties of sport in which to revel.

"Plan to spend a part of your vacation up here with us," the Committee urges, "in this ideal summer climate—the finest on the Continent where it is warm enough during the day to be pleasant and cool enough at night to make restful sleep easy."

★

Seems if all these ships from South America are stepping on our CORNS.

★

ASK THE BOSS TODAY!

"It has come to our attention that some of the very fine gentlemen comprising the membership of the Society are a bit timid about approaching 'the boss' relative to attending the association's meetings," writes M. Frank Beyer, President of the newly formed Fort William-Port Arthur Chapter of the Society.

"This is regrettable and disadvantageous to both and hardly conducive to the greatest profit of the firm. However, should those Superintendents wishing to have us approach their 'chiefs' but send us their names I am sure we can arrange with the Grain Exchange here to issue a special invitation that we hope will do much good.

"We're counting on the biggest support from members and the largest attendance of 'first-timers' so far on record. We want you with us, we're planning on your being here, and we've spared no effort to make the program and visit attractive from every standpoint, so, Mr. Superintendent, won't you personally approach your 'boss' today,—or else write us, please?"

★

CATALOGS THE HEADACHES

Seed Trade Reporting Bureau, 223 W. Jackson Blvd., Chicago, has cataloged all weeds found in grains, which authoritative text is available from them for 75c.

MECHANICAL AND OPERATIVE LEADERSHIP TITLE HELD IN TWIN PORTS

The innovations and practices employed in the terminals of Fort William-Port Arthur, which will be thrown open for the inspection of the Convention delegates, writes Mr. S. S. Orstad, are surpassed nowhere in the world. The inspection tour already arranged will repay everyone attending most handsomely.



REDUCED FARES TO CONVENTION

"Elevator Managers and Superintendents attending the SOGESONA Convention in Fort William-Port Arthur on June 14-15-16 should be instructed to avail themselves of round-trip tickets at SUMMER EXCURSION RATES which will be available to these twin ports from all the Western territory at the time of your meeting," the Western Passenger Association advises General Convention Chairman S. S. Orstad.

"Fares will be based on slightly less than the regular daily round trip fares, which are approximately 2c per mile in sleeping and parlor cars, and all tickets bear limit of 30 days."



CHICKEN AND BEAN DINNER AGAIN FEATURE

The Fort William-Port Arthur Convention Committee have again planned for one of those side-splitting events—the annual Chicken and Bean Dinner, chicken to be eaten and paid for by the losing bean-eating new-membership team. What a riot of fun—but wasn't that bean pie ferocious, sorrowfully reminds James Mackenzie of the Three Rivers (Quebec) Grain & Elevator Company.



AOM LENDS HELPFUL HAND

"Will indeed be very glad to suggest to our members that they urge their Elevator Superintendents to attend the Society's meeting. I hope that the SOGES will have a fine turn out," writes Secretary C. W. Partridge of the Association of Operative Millers, whose annual convention will be held in Detroit, Michigan, June 7-11.



Maybe the powers that be think the term, "Buy American" means "Buy South American!"



YOU CAN'T CLAP WITH ONE HAND

"By knowing how other kindred companies have solved the same problem through the Society of Grain Elevator Superintendents it is no longer necessary to try to work out **your** problems alone," states Henry S. Cox, National President, in inviting other Elevator Heads to join in their activities.

"The Elevator Superintendents' Association is the **only** organization of its kind in the field, and you're missing something vital if you are not a member. So join today!"

N. M. PATERSON COMPANY INVITES YOU

The N. M. Paterson & Company, Limited, of Fort William, Ontario, is, through its Officers, Mr. N. M. Paterson and E. B. Sutherland, behind the Elevator Superintendents' Association coming Convention to be held in the twin ports on June 14-16 most enthusiastically. They are one of the Society's best supporters in Canada.



NOTE OF COMMENDATION

"I hope that this coming meeting of the Society will be a very successful one and shall do all I can to assist to make it so," writes Mr. H. J. Humphrey, Vice President and General Manager of the Canadian Pacific Railway, operators of a number of terminal elevators.



A DILLER, A DOLLAR

The newly hired office boy showed up at ten o'clock. The office manager sternly said, "You should have been here at eight o'clock." "T'Helen you say," gasped the youthful employee, "what happened?"



DULUTH SUPERINTENDENTS TO MINNEAPOLIS CHAPTER

According to word from E. J. Raether, Brooks Elevator Company, Secretary of the Minneapolis Chapter of the Society of Grain Elevator Superintendents, "Duluth Members will hereafter be included in their monthly program activities,"—which of late are said to be most interesting and helpful.

"Power Problems held the attention of the Chapter last month, whereas an inspection trip through a new malt plant at Shakopee—followed by talks on barley handling engaged their interest at their March affair on the 30th."



READY FOR YOU!

Our new catalog No. 58 is now on the presses and will be ready for distribution about April 15. Bigger and better than ever. Over three hundred pages of machinery and supplies for Grain Elevators, Flour Mills, Feed Plants and allied industries.

WRITE FOR YOUR COPY NOW

This complete catalog gives you detailed information and distributors net prices on anything you need in the line of mechanical equipment and accessories. It is free for the asking. Mention this magazine.

R.R. HOWELL & CO.
MINNEAPOLIS MINN.

SUCCESSFUL INSTALLATION

"We've finished installing our suction system here and are using it with success. The system has a 200 H. P. motor, and a rooth blower," advises Erich B. Reiner, Vice President of the Houston (Texas) Milling Company.

"We installed this device on the Houston Ship Channel and were able to connect it with our reversible conveyor belt so we are able to bring grain by mechanical means direct from the ship's hold to our bins.

"The capacity of this system is from three to five thousand bushels per hour and the flexible hose makes it simple for us to reach in corners of the ship's holds. It is very easy to operate, requires no time for rigging and from the standpoint of electricity is not too expensive.

"In connection with the suction system is a dust collector which lessens any fire hazard for the grain which enters the house."



DUST EXPLOSION FILM AVAILABLE FOR MEETINGS

Dr. Price's Dust Explosion film is now available in "talkie" form for showing to groups of workmen. A list of publications on this subject is also yours for the asking.



ELEVATOR DUST GOES UP

Elevator dust is bringing \$27 a ton on the Kansas City market, an increase of \$5 @ 7 over recent sales. . . . That is surely a more commendable outlet than the manner in which some of it has been used in the past.



NATURALLY

Lecturer (in small town): "Of course, you all know what the inside of a corpuscle is like. . . ."

Chairman of meeting (interrupting): "Most of us do, but ye better explain for the benefit of them that has never been inside one."

HELP NEEDED!

Again we are forced to appeal to the readers of GRAIN for any November Numbers that have served their purposes. Our supply is completely exhausted and inquiries still persist for this issue.

At the same time we wish to thank those many kind readers who responded in a similar emergency a while back.

SHERLOCK HOLMES HIRED

Sherlock Holmes of author's ink and ether waves will be added to the staff of GRAIN the first of next month.

His one specific assignment will be to pleasantly coerce Superintendents to dig up their past for an interesting biography—as well as their last photographed likeness, which move was found necessary to overcome shyness and forgotten promises.

Come on, Mr. Mailman,—more co-operation from you, please!

HOW SURPLUSES STARTED

When periwigs were fashionable in England it was stated that hairdressers of the time used enough flour to make five and a half million loaves of bread. To restrict that usage the Government of the late eighteenth century imposed a tax; at first the tax brought in some \$1,000,000 in the year, but eventually it killed the fashion and left more flour for bread (and the weevils).—The Miller, London.



Once there was a Business Man

Who wouldn't run an ad,

And when no business came his way—

Wasn't he awfully sad!



The American farmer installed radios while his competitors were installing new elevators.



GRAIN DOORS TO BE STANDARDIZED

Word comes from a Wisconsin Superintendent that the Western Weighing Association will standardize on one size of grain door in the future. "This will be six and a half feet long, whereas in the past they have come in both six and seven foot lengths.

"A big trouble with grain doors, outside of misfits, is the reclaimed door. Sometimes the nails are not clipped, making it difficult to get a car unloaded without tearing our hands.

"On several occasions we have turned down doors like that and the Western Weighing Association has informed us that we should. The door reclaiming agency then has to take the doors back and clip the nails on them.

"Most of the doors now coming to us are of soft wood, so we do not have the nailing troubles that we used to have with birch doors."

HARNESS AND LIFE

"He died in the harness, poor chap."

"Yes, and by the way, did you ever notice how much like a harness life is?"

"There are traces of care, lines of trouble, bits of good fortune, and breaches of good faith. Also tongues that must be bridled, passions curbed, and everybody has to tug to pull through!"



FRANK NEILSON'S BELT COVERING ENDORSED BY FIRE PROTECTIVE GROUP

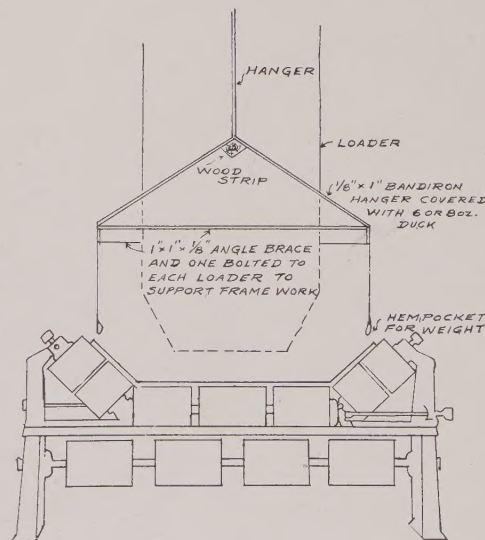
"Know the Elevator Superintendents will be glad to learn that Frank Neilson's belt covering idea presented at the Society's last annual convention has been recommended by the subcommittee of the Dust Explosion Hazards Committee of the National Fire Protection Association and adopted with certain reservations by the main Committee," advises Hylton R. Brown, Engineer in the Chemical Engineering Research Division of the USDA, Washington, D. C.

"This will not become a part of Code 562 until the annual meeting of the NFPA in Chicago the week of May 10th.

"Code provisions will then stipulate:

602½ — **Belt Conveyors:** All conveyor belts, except those on which movable trippers are used, should be provided with a hood covering extending the entire length of belts and terminating at belt discharges, equipped with adequate positive air aspiration as required under Item 603. Canvas properly flame-proofed or other approved material should be used for this purpose."

Mr. Neilson advises that "painting the canvas with waterglass will flame-proof the canvas."



The Operating Heads of the
FORT WILLIAM - PORT ARTHUR
GRAIN ELEVATORS

Extend a Cordial Invitation
to the

OPERATING HEADS OF ALL OTHER
North American **GRAIN ELEVATORS**

to attend the

**Eighth Convention of the Society
of Grain Elevator Superintendents**

to be held in

Fort William-Port Arthur

JUNE 14, 15, 16



Instructive Program—Inspection Tours of the
World's Greatest Grain Handling Plants
Constructive Entertainment

You can make this a Profit-Producing Trip!

BRING THE LADIES